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Pinon  
(*Pinus edulis* Engelm.)

Stacked Volume, Cubic Feet, Based on Diameter in Inches at Breast  
Height and Number of Four-Foot Pieces  
Arizona-New Mexico

Stacked Volume  
With Bark  
Cubic Foot

1940

J. Howell, Jr.

D.B.H. Inches	Number of 4-Foot Pieces																				Basis No. of Trees			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				
	Stacked Volume - Cubic Feet																							
1	0.06	0.17	0.53	0.69	0.79	0.82															8			
2	0.25	0.54	0.80	0.89	1.07	1.21	1.35	1.48	1.62	1.70	2.00	2.05	2.08	2.18							41			
3	0.46	0.69	0.88	1.12	1.35	1.55	1.75	1.90	2.03	2.35	2.45	2.50	2.63	2.79	2.83	3.10	3.30	3.68	3.90	4.00	54			
4	0.72	0.86	1.33	1.75	2.18	2.35	2.68	3.00	3.23	3.42	3.90	3.93	4.08	4.18	4.30	4.55	4.80	5.20	5.50	5.60	65			
5	0.84	1.17	1.86	2.42	3.00	3.40	3.80	4.05	4.30	4.57	5.05	5.18	5.35	5.47	5.55	6.00	6.40	7.10	7.60	7.95	57			
6	1.06	1.57	2.45	3.30	3.93	4.40	4.82	5.15	5.50	5.78	6.70	7.00	7.10	7.40	7.50	8.00	8.75	9.60	10.50	11.20	63			
7	1.33	1.96	3.21	4.14	4.78	5.28	5.85	6.40	7.00	7.40	8.50	8.78	9.00	9.40	9.60	10.30	12.00	13.50	14.75	15.00	57			
8	1.62	2.30	3.80	4.73	5.50	6.30	7.10	8.70	8.50	9.00	10.00	11.15	11.80	12.00	12.70	13.45	15.05	16.10	16.70	17.15	43			
9	2.78	4.43	5.40	6.58	7.55	8.50	9.20	9.90	11.20	13.45	14.00	14.50	15.10	15.20	16.00	16.95	18.20	18.60	18.90		28			
10	3.50	5.12	6.50	8.00	9.10	10.40	12.05	13.40	14.20	16.00	16.35	16.70	17.00	17.30	17.80	18.75	19.95	20.70	21.40		28			
11		5.65	7.50	9.20	10.75	12.70	14.10	15.25	16.00	17.50	17.75	18.25	18.50	18.75	19.30	20.50	22.30	23.25	24.00		10			
12		6.30	8.38	10.00	12.60	14.50	15.70	16.55	17.25	18.55	18.80	19.25	19.45	19.70	20.50	22.00	24.25	25.80	26.90		5			
13			9.00	11.50	13.75	15.40	16.55	17.25	18.40	19.30	19.60	20.00	20.40	20.90	21.80	23.50	26.30	29.25	29.80		2			
14				9.60	12.70	15.00	16.25	17.20	18.00	18.75	20.00	20.45	21.00	21.75	22.25	22.50	25.40	29.50	31.90	33.10		1		
15					14.40	16.00	17.35	18.20	19.00	19.60	21.90	22.30	23.25	23.50	24.15	25.70	29.20	33.00	35.80	37.20		1		
16						15.40	17.25	18.20	19.15	19.85	20.50	23.75	24.00	24.80	25.25	26.50	29.25	32.00	37.00	40.25	41.80		0	
17							17.75	19.00	19.80	21.00	22.30	25.00	26.75	27.75	29.25	29.60	31.75	35.00	41.00	44.00	45.50		0	
18								18.50	19.60	21.00	22.50	23.60	28.25	29.00	29.85	31.00	32.40	34.50	39.00	44.75	48.20	50.00		0
19									22.30	23.50	25.00	29.75	31.00	33.00	33.60	35.00	38.00	42.00	48.00	51.10	53.00		0	
20									23.25	24.90	27.50	31.80	33.00	34.50	35.75	37.20	40.20	45.00	51.25	54.00	55.75		0	
Basis	59	57	60	47	34	27	27	25	16	10	15	12	14	9	8	6	8	7	10	10	463			

Basis, 551 Trees. Measured by the S.C.S. Volume, all sticks, 4-feet long, having a middle diameter of 2 inches or more, outside bark. Volume by stacking in regular ricks and computing contents. Cord wood only. Measurements by steel tape.  
Aggregate Deviation- Table, 1.7% high.  
Average Percentage Deviation, 23.5%.

D.B.H. Inches	Number of 4-Foot Pieces																				Basis No. of Trees			
	22	24	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200				
Stacked Volume - Cubic Feet																								
5	8.45	8.90	9.80	12.10	14.20																			
6	12.20	12.80	15.00	16.50	17.30	18.00															0			
7	15.70	16.20	17.50	18.80	19.80	20.80	22.80														1			
8	17.75	18.25	19.35	21.00	23.00	24.80	27.50	30.00													6			
9	19.40	20.00	22.00	24.90	28.00	31.00	34.50	37.10	40.50	43.25	47.00										7			
10	22.50	23.40	27.00	31.75	35.00	40.00	43.50	47.80	50.50	53.70	57.00	62.00									5			
11	25.60	27.75	32.00	37.20	42.50	47.00	51.00	55.00	57.00	61.20	67.00	71.80	76.00								3			
12	29.10	31.00	35.80	43.00	48.00	52.50	56.50	61.40	65.25	69.00	73.50	78.00	82.50	86.60							11			
13	32.50	34.40	40.00	47.80	51.70	56.00	61.20	67.00	70.10	74.00	78.00	83.00	88.50	90.50	94.00						13			
14	35.80	37.50	44.00	51.20	56.00	61.70	67.00	72.00	75.80	79.00	82.00	87.00	91.00	95.00	98.00	102.00					10			
15	40.25	43.00	50.00	56.00	62.00	68.00	72.00	78.00	81.00	84.00	88.50	92.00	96.00	100.00	104.00	107.00	112.00				13			
16	44.90	47.50	53.80	61.25	68.00	74.00	79.00	83.00	86.00	89.00	92.00	96.00	100.00	105.00	108.00	113.50	118.00	125.00			4			
17	49.00	51.20	58.00	67.50	73.80	79.00	83.80	87.00	90.10	93.50	96.00	101.00	105.00	110.00	115.00	120.00	122.00	133.50	140.00		4			
18	52.50	55.00	62.70	72.00	78.00	83.00	87.25	90.75	94.00	96.50	100.00	105.00	108.00	115.00	122.00	127.50	134.00	140.00	148.00	150.00	2			
19	56.00	58.50	68.00	76.30	82.50	86.75	90.50	95.00	97.00	100.00	104.00	108.50	114.00	122.00	127.00	134.00	141.00	148.00	155.00	157.50	1			
20	58.75	62.20	71.00	79.10	84.50	89.40	93.00	97.00	100.00	103.50	107.00	113.00	118.00	127.50	134.00	139.00	145.00	155.00	160.00	168.00	1			
21			76.00	84.50	89.90	94.00	97.20	102.00	105.00	109.00	114.00	120.00	127.50	135.00	142.00	148.00	155.00	163.00	175.00	180.00	2			
22				89.00	94.00	97.00	102.50	107.00	110.00	116.00	122.00	129.00	135.00	144.00	149.00	158.00	168.00	176.00	189.00	195.00	1			
23					98.00	102.50	107.50	113.50	118.00	122.50	130.00	137.50	145.00	152.00	161.00	170.00	182.00	190.00	205.00	215.00	0			
24						104.00	108.50	116.00	122.00	127.50	134.00	140.00	148.00	155.00	168.00	175.00	188.00	200.00	216.00	230.00	240.00	1		
25							115.00	122.50	130.00	135.00	140.50	148.00	157.50	167.00	178.00	190.00	202.00	215.00	230.00	247.00	265.00	0		
26								122.00	130.00	137.50	144.00	148.00	158.00	168.00	177.00	193.00	205.00	220.00	237.00	245.00	267.50	283.00	0	
27									137.50	145.00	150.00	158.00	168.00	182.00	192.00	210.00	223.00	236.00	250.00	272.00	295.00	310.00	0	
28										150.00	160.00	168.00	177.00	190.00	205.00	222.50	237.00	250.00	275.00	293.00	313.00	340.00	0	
29											195.00	205.00	222.50	235.00	255.00	277.50	300.00	330.00	365.00	400.00	465.00	510.00		1
30												240.00	255.00	277.00	300.00	343.00	382.00	430.00	480.00	588.00	660.00	760.00		0
Basis	19	22	13	13	7	4	0	2	2	2	2	0	0	1	0	0	0	0	0	1	88			

## Height and

Basis Trees	Cord Volume With Bark		Standard Cord Basis		
	160	170	180	190	200
0					
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					

Pinon  
(*Pinus edulis*, Engelm.)

Cord Volume, Based on Diameter in Inches at Breast Height and  
Number of Four-Foot Picces  
Arizona-New Mexico

1940

Cord Volume  
With Bark  
Standard Cord

J. Howell, Jr.

D.B.H. Inches	Number of 4-Foot Picces																				Basis No. of Trees		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
1	0.0005	0.0013	0.0041	0.0054	0.0062	0.0064															8		
2	0.0019	0.0042	0.0063	0.0069	0.0084	0.0095	0.0105	0.0116	0.0127	0.0133	0.0156	0.0162	0.0163	0.0170							41		
3	0.0036	0.0053	0.0069	0.0088	0.0106	0.0121	0.0137	0.0148	0.0157	0.0184	0.0191	0.0195	0.0206	0.0218	0.0221	0.0242	0.0258	0.0288	0.0305	0.0312	54		
4	0.0056	0.0067	0.0104	0.0137	0.0170	0.0184	0.0209	0.0235	0.0253	0.0267	0.0305	0.0307	0.0319	0.0325	0.0336	0.0356	0.0375	0.0406	0.0430	0.0438	65		
5	0.0066	0.0091	0.0145	0.0189	0.0234	0.0266	0.0297	0.0316	0.0336	0.0357	0.0395	0.0405	0.0418	0.0427	0.0434	0.0469	0.0500	0.0555	0.0594	0.0621	57		
6	0.0083	0.0123	0.0190	0.0258	0.0307	0.0344	0.0377	0.0402	0.0430	0.0452	0.0524	0.0570	0.0554	0.0578	0.0586	0.625	0.0684	0.0750	0.0820	0.0875	63		
7	0.0104	0.0153	0.0251	0.0323	0.0373	0.0413	0.0457	0.0500	0.0547	0.0578	0.0664	0.0686	0.0704	0.0734	0.0750	0.804	0.0938	0.1055	0.1153	0.1172	57		
8	0.0127	0.0180	0.0297	0.0370	0.0430	0.0493	0.0554	0.0680	0.0664	0.0703	0.0781	0.0871	0.0922	0.0938	0.0992	0.1051	0.1175	0.1258	0.1305	0.1340	43		
9		0.0217	0.0346	0.0422	0.0514	0.0590	0.0664	0.0718	0.0774	0.0875	0.1050	0.1094	0.1133	0.1180	0.1189	0.1251	0.1321	0.1422	0.1454	0.1476	28		
10		0.0273	0.0400	0.0508	0.0625	0.0711	0.0812	0.0936	0.1046	0.1106	0.1250	0.1277	0.1304	0.1329	0.1352	0.1390	0.1465	0.1559	0.1501	0.1672	28		
11		0.0441	0.0586	0.0718	0.0840	0.0988	0.1103	0.1192	0.1250	0.1367	0.1386	0.1427	0.146	0.1472	0.1509	0.1601	0.1744	0.1817	0.1874	10			
12		0.0492	0.0654	0.0782	0.0992	0.1133	0.1218	0.1293	0.1348	0.1450	0.1470	0.1504	0.1519	0.1540	0.1602	0.1719	0.1895	0.2016	0.2100	5			
13			0.0703	0.0898	0.1074	0.1203	0.1293	0.1348	0.1438	0.1508	0.1532	0.1563	0.1581	0.1633	0.1704	0.1836	0.2054	0.2286	0.2329	2			
14				0.0750	0.0992	0.1172	0.1260	0.1344	0.1407	0.1465	0.1563	0.1597	0.1641	0.1700	0.1735	0.1758	0.1983	0.2304	0.2492	0.2588	1		
15					0.1125	0.1250	0.1356	0.1421	0.1485	0.1532	0.1711	0.1742	0.1818	0.1837	0.1887	0.2009	0.2280	0.2579	0.2796	0.2907	1		
16						0.1203	0.1347	0.1422	0.1496	0.1550	0.1603	0.1855	0.1875	0.1938	0.1973	0.2070	0.2286	0.2500	0.2891	0.3146	0.3264	0	
17							0.1395	0.1485	0.1548	0.1640	0.1743	0.1954	0.2090	0.2169	0.2284	0.2313	0.2480	0.2734	0.3204	0.3440	0.3556	0	
18								0.1445	0.1531	0.1640	0.1758	0.1845	0.2209	0.2266	0.2332	0.2421	0.2530	0.2697	0.3046	0.3496	0.3767	0.3907	0
19									0.1741	0.1835	0.1954	0.2324	0.2421	0.2578	0.2627	0.2734	0.2970	0.3280	0.3750	0.4025	0.4142	0	
20										0.1818	0.1945	0.2150	0.2484	0.2580	0.2696	0.2793	0.2905	0.3140	0.3517	0.4007	0.4220	0.4356	0
Basis	59	57	60	47	34	27	27	25	16	10	15	12	14	9	8	6	8	7	10	10	463		

Basis- 551 trees. Measured by the S.C.S. Volume- all sticks 4 feet long, having a middle diameter of 2 inches or more, outside bark. Volume by stacking in regular ricks and computing contents. Cordwood only. Cord volume by converting stacked cubic volume.  
Aggregate Deviation- Table 1.7% high.  
Average Percentage Deviation, 25.5%.

D.B.H. Inches	Number of 4-Foot Pieces																				Basis No. of Trees	
	22	24	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200		
Cord Volume - Standard Cord																						
5	0.0660	0.0696	0.0766	0.0946	0.1109																0	
6	0.0954	0.1000	0.1172	0.1289	0.1352	0.1406															1	
7	0.1226	0.1265	0.1367	0.1468	0.1547	0.1625	0.1782														6	
8	0.1387	0.1425	0.1512	0.1640	0.1796	0.1937	0.2149	0.2346													7	
9	0.1515	0.1563	0.1719	0.1945	0.2187	0.2421	0.2695	0.2900	0.3164	0.3380	0.3671										5	
10	0.1757	0.1828	0.2109	0.2481	0.2734	0.3124	0.3400	0.3737	0.3946	0.4193	0.4453	0.4843									3	
11	0.2000	0.2170	0.2500	0.2906	0.3320	0.3673	0.3984	0.4296	0.4453	0.4782	0.5237	0.5608	0.5938								11	
12	0.2272	0.2421	0.2796	0.3360	0.3750	0.4100	0.4415	0.4796	0.5099	0.5394	0.5745	0.6093	0.6448	0.6772							13	
13	0.2540	0.2688	0.3126	0.3730	0.4039	0.4374	0.4782	0.5240	0.5478	0.5780	0.6098	0.6484	0.6918	0.7068	0.7345						10	
14	0.2799	0.2928	0.3440	0.4000	0.4376	0.4821	0.5234	0.5624	0.5922	0.6122	0.6408	0.6797	0.7104	0.7418	0.7658	0.7972					13	
15	0.3143	0.3360	0.3904	0.4374	0.4845	0.5309	0.5623	0.6098	0.6327	0.6560	0.6915	0.7186	0.7504	0.7810	0.8122	0.8355	0.8745				4	
16	0.3509	0.3710	0.4202	0.4787	0.5316	0.5784	0.6174	0.6482	0.6722	0.6953	0.7184	0.7500	0.7810	0.8200	0.8435	0.8862	0.9220	0.9765			4	
17	0.3827	0.4001	0.4530	0.5275	0.5764	0.6170	0.6548	0.6800	0.7038	0.7201	0.7500	0.7882	0.8200	0.8590	0.8980	0.9372	0.9530	1.0425	1.0940		2	
18	0.4102	0.4297	0.4898	0.5624	0.6093	0.6483	0.6816	0.7090	0.7342	0.7538	0.7810	0.8200	0.8440	0.8982	0.9530	0.9955	1.0472	1.0945	1.1555	1.1720		2
19	0.4377	0.4570	0.5310	0.5960	0.6405	0.6780	0.7065	0.7420	0.7580	0.7810	0.8125	0.8475	0.8908	0.9524	0.9920	1.0465	1.1020	1.1570	1.2110	1.2310		1
20	0.4590	0.4859	0.5548	0.6181	0.6600	0.6980	0.7265	0.7577	0.7810	0.8085	0.8357	0.8827	0.9220	0.9955	1.0472	1.0865	1.1335	1.2110	1.2500	1.3120		1
21			0.5937	0.6600	0.7026	0.7347	0.7594	0.7960	0.8103	0.8514	0.8900	0.9375	0.9955	1.0550	1.1095	1.1572	1.2120	1.2740	1.3670	1.4055		2
22				0.6956	0.7340	0.7578	0.8010	0.8360	0.8594	0.9060	0.9530	1.0077	1.0550	1.1250	1.1648	1.2350	1.3130	1.3750	1.4765	1.5240		1
23					0.7656	0.8006	0.8400	0.8860	0.9240	0.9562	1.0160	1.0745	1.1330	1.1865	1.2580	1.3280	1.4215	1.4845	1.6015	1.6800		0
24					0.8115	0.8479	0.9060	0.9528	0.9964	1.0474	1.0945	1.1575	1.2115	1.3130	1.3680	1.4700	1.5630	1.6880	1.7970	1.8760		1
25						0.8985	0.9570	1.0155	1.0545	1.0975	1.1560	1.2315	1.3060	1.3900	1.4845	1.5780	1.6800	1.7975	1.9300	2.0700		0
26						0.9520	1.0155	1.0748	1.126	1.1560	1.2340	1.3128	1.3828	1.5075	1.6015	1.7195	1.8520	1.9145	2.0905	2.2110		0
27							1.0750	1.1325	1.172	1.2340	1.3122	1.4220	1.5000	1.6100	1.7430	1.8445	1.9530	2.1250	2.3035	2.4220		0
28								1.1718	1.250	1.3122	1.3830	1.4835	1.6020	1.7380	1.8520	1.9530	2.1480	2.2890	2.4460	2.6540		0
29									1.5240	1.6015	1.7380	1.8360	1.9925	2.1695	2.3440	2.5785	2.8510	3.1245	3.6325	3.9875		1
30										1.8750	1.9915	2.1640	2.3410	2.6790	2.9825	3.3580	3.750	4.5910	5.1575	5.9400		0
Basis	19	22	13	13	7	4	0	2	2	2	2	0	0	1	0	0	0	0	1	0	88	

